

Abstract

A system for flowing fuel vapor through a canister purge valve includes a valve body having a wall that defines a passage between a first port and a second port. The first port may be adapted for fuel vapor communication with a fuel vapor collection canister, and the second port may be adapted for fuel vapor communication with an intake manifold of an internal combustion engine. The system includes an elastomeric member having a first end, a second end, and an active zone between the first end and the second end. The active zone forms a flow entry portion, a sealing portion, and a flow exit portion. The elastomeric member is deformable between a first configuration that prohibits flow over the sealing portion, and a second configuration that permits flow over the sealing portion. The system includes a stator proximate the passage, an electromagnetic coil surrounding the passage, and an armature coupled to the elastomeric member.